


NOTES: (UNLESS OTHERWISE SPECIFIED)

1. ALL RESISTORS ARE $270 \Omega, \frac{1}{4}W \pm 5\%$
2. THIS DRAWING CONSISTS OF THE FOLLOWING SHEETS.
1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0,
13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0, 21.0, 22.0

REFERENCE DESIGNATIONS	
LAST USED	NOT USED
IC 48	
C 31	
R72	
DS30	
CR 19	

REFERENCE DRAWINGS	
ASSEMBLY	44E0645
ARTWORK	97E0794
SILKSCREEN	97E0795
SOLDER MASK	97E0796
PARTS LIST	44P0645
P.W. BOARD	40D0546

DR: <i>[Signature]</i> 6-2-72	 varian data machines / a varian subsidiary 2722 michelson drive / irvine / california / 92664			
CHK: <i>[Signature]</i> 8/11/72				
DSGN: <i>[Signature]</i> 6-2-72	TITLE			
ENGR: <i>[Signature]</i> 8/11/72	LOGIC DIAGRAM			
APPD: <i>[Signature]</i> 8/11/72	DISPLAY BD DM 374			
APPD				
THIS DOCUMENT MAY CONTAIN PROPRIETARY INFORMATION AND SUCH INFORMATION MAY NOT BE DISCLOSED TO OTHERS FOR ANY PURPOSE OR USED TO PRODUCE THE ARTICLE OR SUBJECT, WITHOUT WRIT- TEN PERMISSION FROM VDM	CODE IDENT NO.	SIZE	DWG NO	REV
	21101	B	9180406	H
	SCALE ~	V73	SHEET 1.0 OF	

CODE	REVISIONS				
	SYN	CODE	DESCRIPTION	APPROVED	DATE
A			PRODUCTION RELEASE PER EN. 81050	<i>[Signature]</i>	5/15/73
B	<i>LLW</i>		REVISED PER EN 81326	<i>[Signature]</i>	4/11/73
C			REVISED PER EN 81368	<i>[Signature]</i>	1/11/73
D	<i>LLW</i>		REVISED PER E.N. 81688	W. Brown	3/14/73
E	GRL		REVISED PER EN 81972	<i>[Signature]</i>	4/2/73
F			REVISED PER EN 82053	<i>[Signature]</i>	6/12/73
G			REVISED PER EN 82383	<i>[Signature]</i>	9/12/73
I	H	PSY	REVISED PER EN 82576	<i>[Signature]</i>	5/21/74

TABLE OF CONTENTS

POWER DISTRIBUTION AND DECOUPLING	3.0
CONNECTOR FUNCTION	4.0
FILE ADDRESS REGISTER	5.0
TOGGLE REGISTER	6.0
CLOCK TOGGLE REGISTER	7.0
RUN MODE CONTROL	8.0
INTERRUPT CONTROL	9.0
BLINK OSC AND RESET CONTROL	10.0
E BUS DRIVERS	11.0
I/O CONTROL BUFFER	12.0
DATA REGISTER - MOST SIGNIFICANT HALF	13.0
DATA REGISTER - LEAST SIGNIFICANT HALF	14.0
DISPLAY SELECT / RESET	15.0
PULSE REGISTER	16.0
BUS DRIVERS - DATA REGISTER	17.0
DATA DISPLAY DRIVERS	18.0
PUSH BUTTONS	19.0
DISPLAY	20.0
I/O BUS TERMINATORS	21.0
DEBOUNCE AND SWITCH PULLUPS	22.0

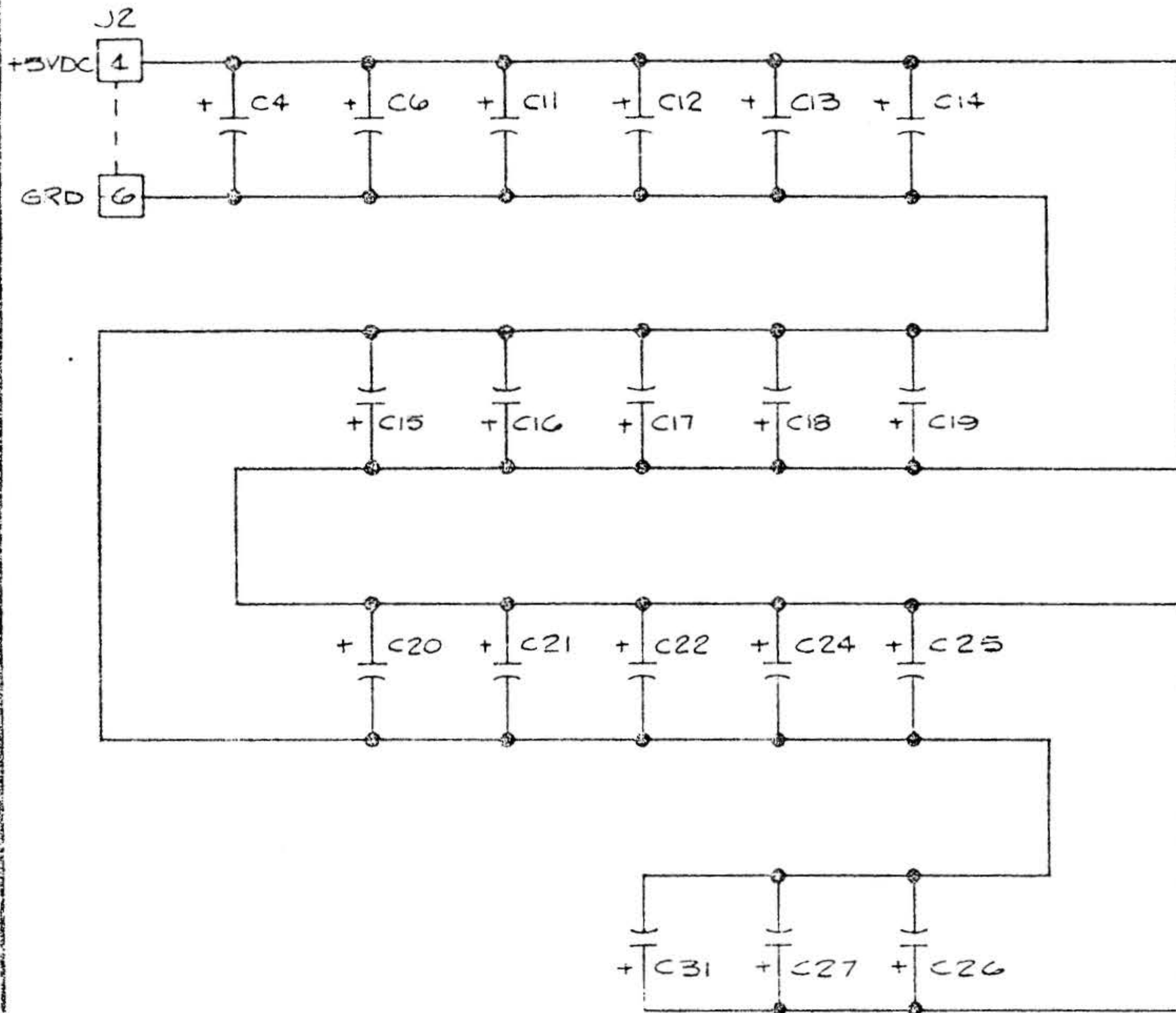
CODE IDENT NO.	SIZE	DWG NO	REV
21101	B	91B0406	H
SCALE		SHEET 2.0 OF	

D

C

B

A



ALL CAPACITORS ARE .01 MFD

POWER & GROUND DISTRIBUTION DECOUPLING

LOGIC IDENT. NO.	REV.	DATE	REV.
21101	B	91B0406	H
SCALE		SHEET 3.0 OF	

CONNECTOR J1

<u>PIN</u>	<u>FUNCTION</u>	<u>SHEET</u>
1	GRD	
2	EB00-I	17.0, 21.0
3	EB01-I	
4	EB02-I	
5	EB03-I	
6	EB04-I	
7	EB05-I	
8	EB06-I	
9	EB07-I	
10	EB08-I	
11	EB09-I	
12	EB10-I	
13	EB11-I	
14	EB12-I	
15	EB13-I	
16	EB14-I	
17	EB15-I	17.0, 21.0
18	GRD	
19	NSS2-	6.0, 21.0
20	NSS1-	6.0, 21.0
21	NSS3-	6.0, 21.0
22	GRD	
23	IEIDL A+	14.0, 21.0
24	GRD	
25	NSTP-	6.0, 21.0
26	GRD	
27	OPSTRT-	8.0, 21.0
28	GRD	
29	PRIOX-I	9.0, 21.0
30	GRD	
31	SERY-I	21.0
32	GRD	
33	IURX-I	9.0, 21.0
34	GRD	
35	TPOX-I	21.0
36	GRD	
37	TPIX-I	21.0
38	GRD	
39	IUAX-I	12.0, 21.0
40	GRD	
41	FRYX-I	12.0, 21.0
42	GRD	
43	IUCX-I	9.0, 21.0
44	GRD	
45	SYRT-I	21.0
46	GRD	
47	DRYX-I	12.0, 21.0
48	GRD	
49	IUJX-I	21.0
50	GRD	

CONNECTOR J2

<u>PIN</u>	<u>FUNCTION</u>	<u>SHEET</u>
1	NDSOFF-	19.0
2	SRST-	19.0
3	NHOLD-	19.0
4	+5VDC	19.0
5	LFRTC+	19.0
6	GRD	9.0
7	24VAC	19.0
8	RETHLD-	19.0

CONNECTOR FUNCTION

REV	REV	REV	REV
21101	3	91B0406	H
SCALE		SHEET 4.034	

D

C

B

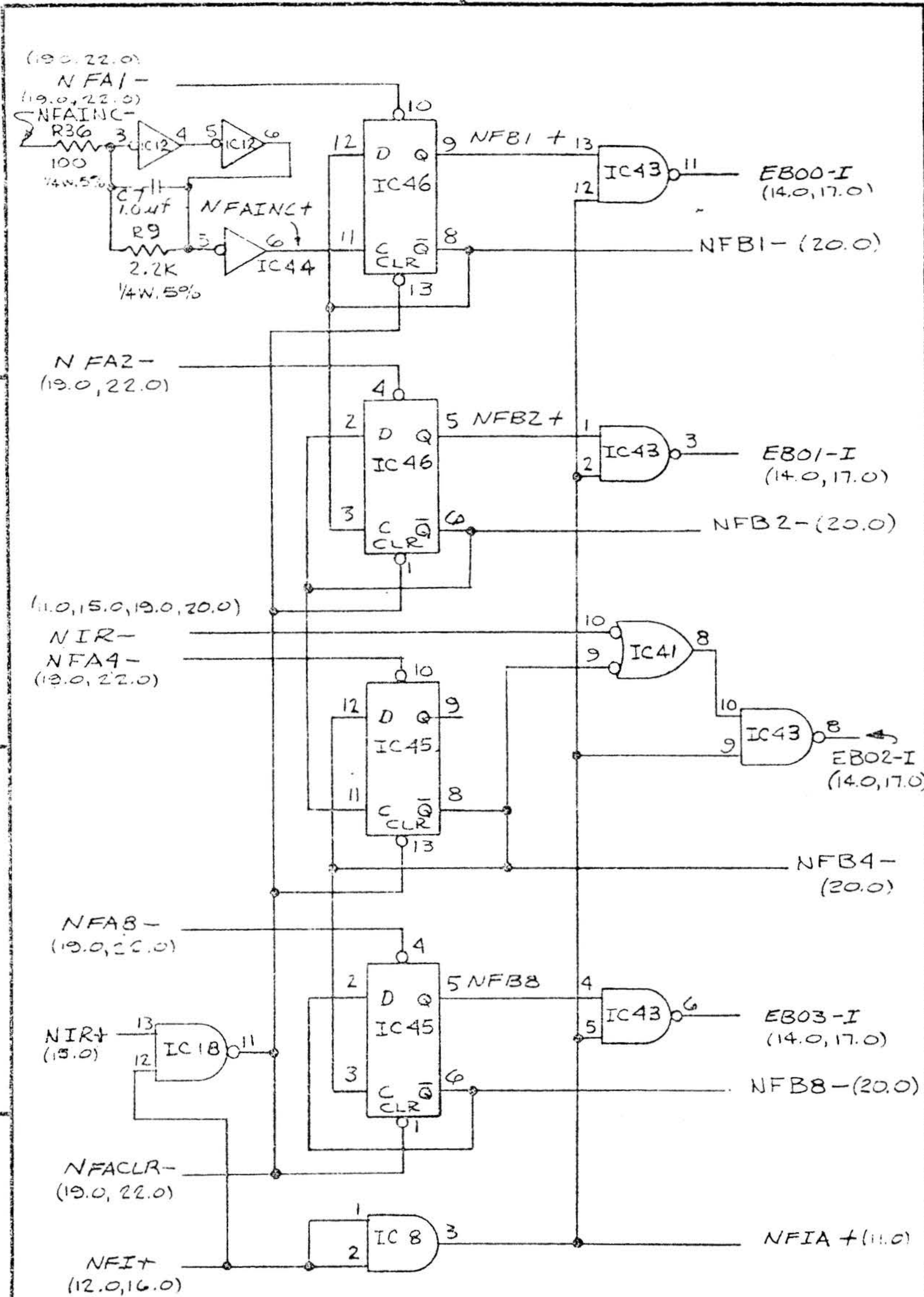
A

D

C

B

A

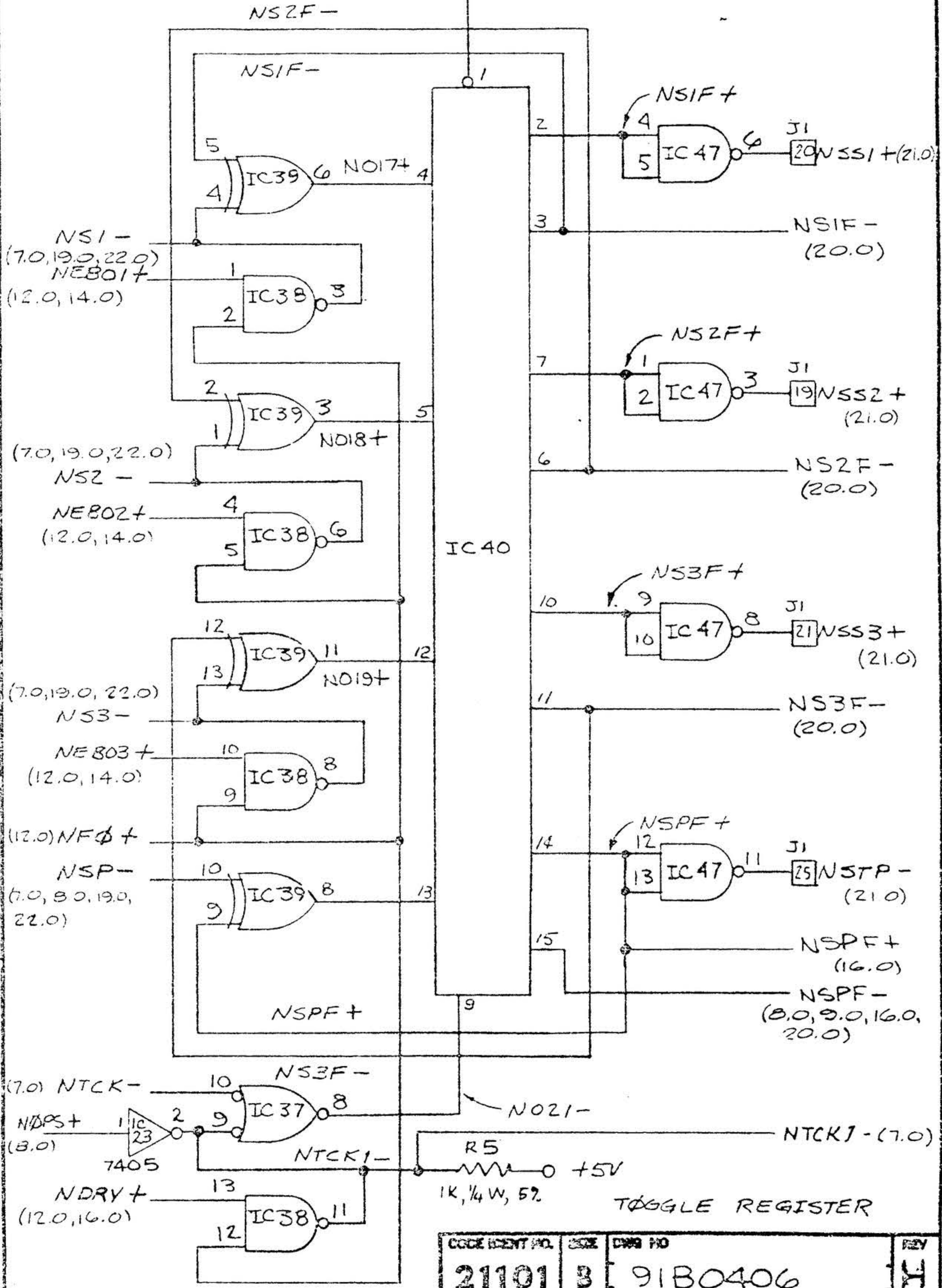


FILE ADDRESS REGISTER

CODE IDENT NO.	SIZE	DWG NO	REV
21101	B	91B0406	H
SCALE 5/11		SHEET 5 OF 5	

D
C
B
A

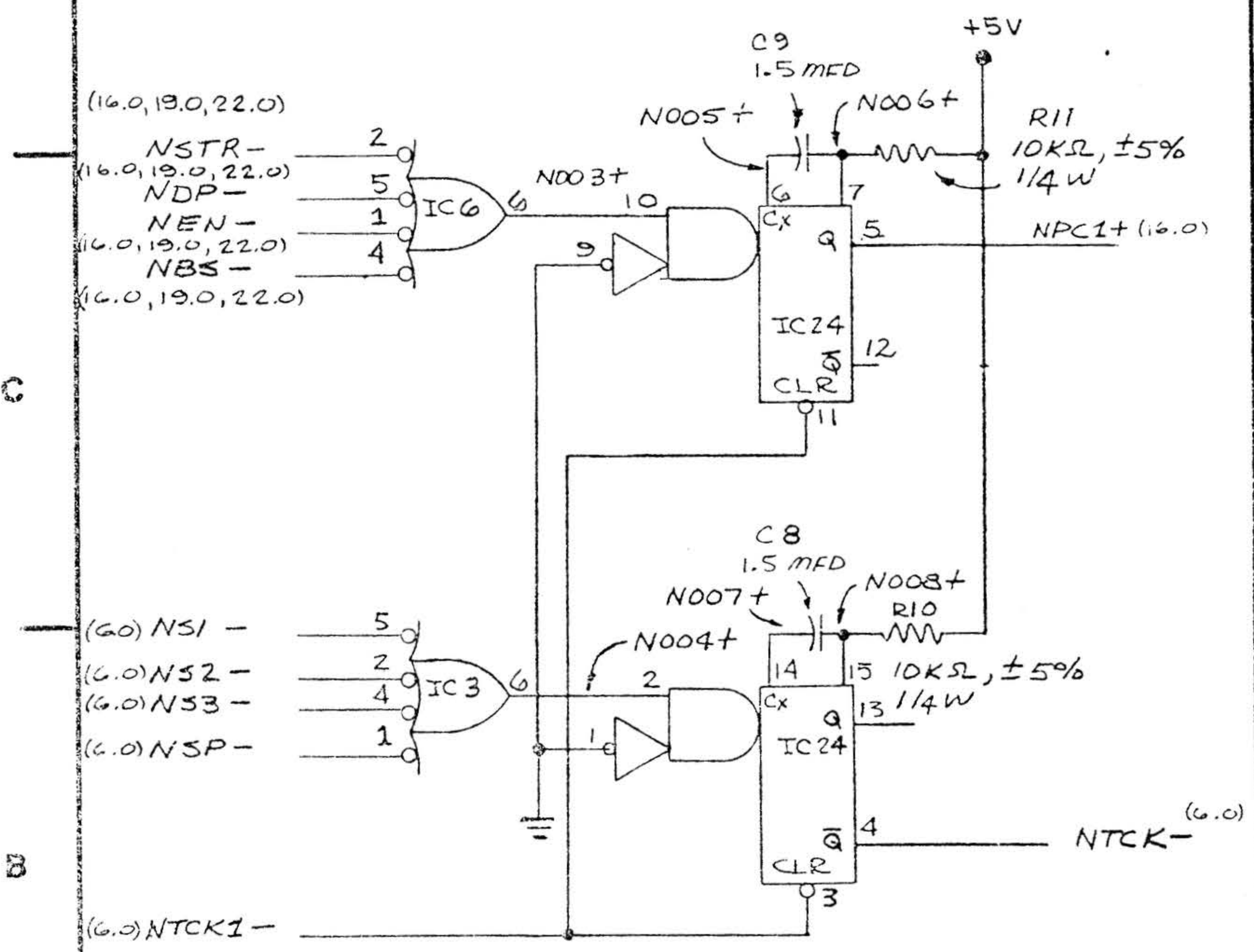
(20,10,0,15,0,8,0,12,0,
16,0,17,0)
NRST1-



CODE IDENT NO.	SIZE	DWG NO	REV
21101	B	91B0406	
SCALE 5M		SHEET 60 OF	

1/3 Extension Drawing 21101

D
C
B
A



CLOCK TOGGLE REGISTER

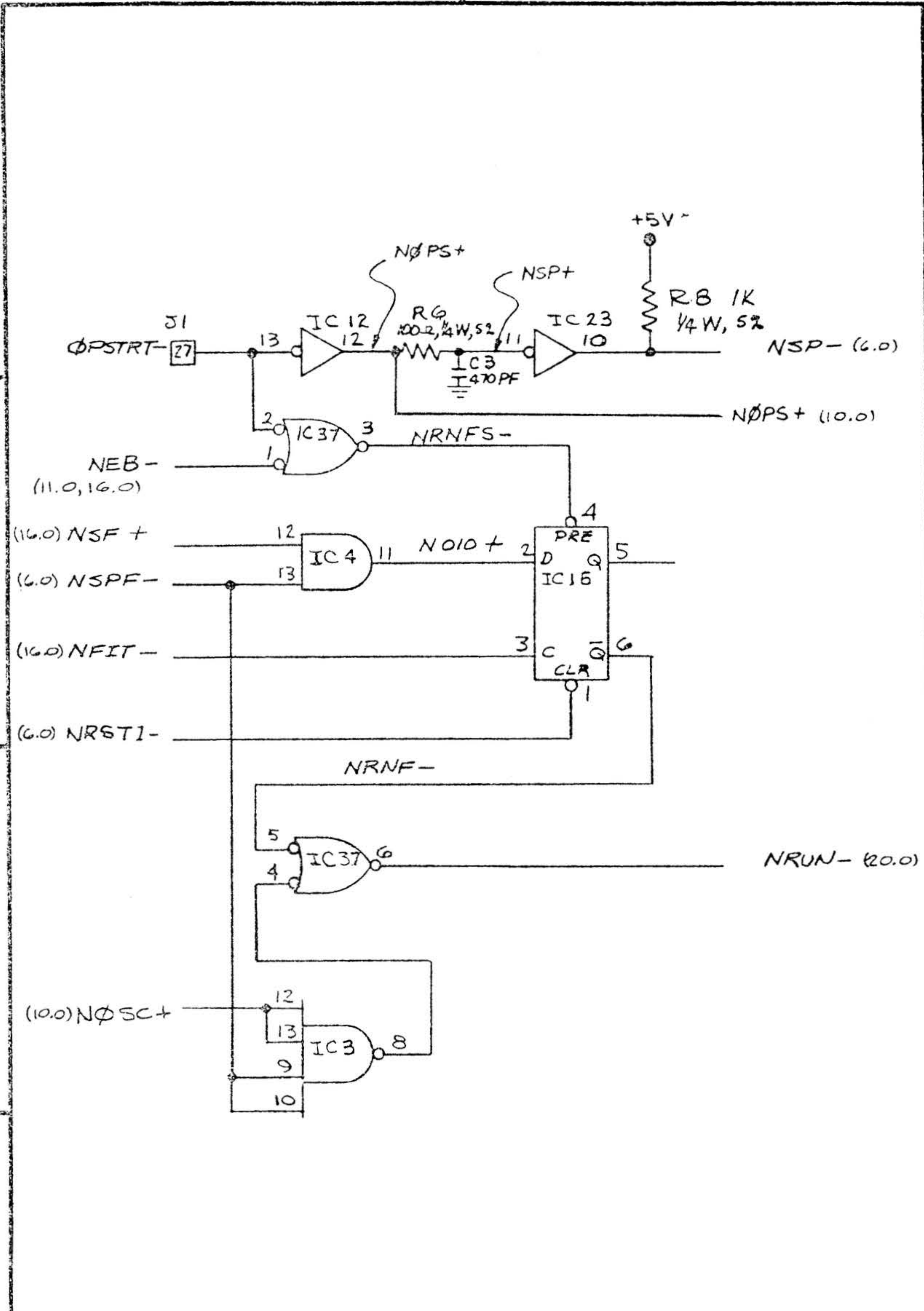
CODE IDENT NO.	SIZE	DWG NO	REV
21101	B	91B0406	H
SCALE 5/8		OFFSET 7.0 CF	

D

C

B

A



RUN MODE CONTROL

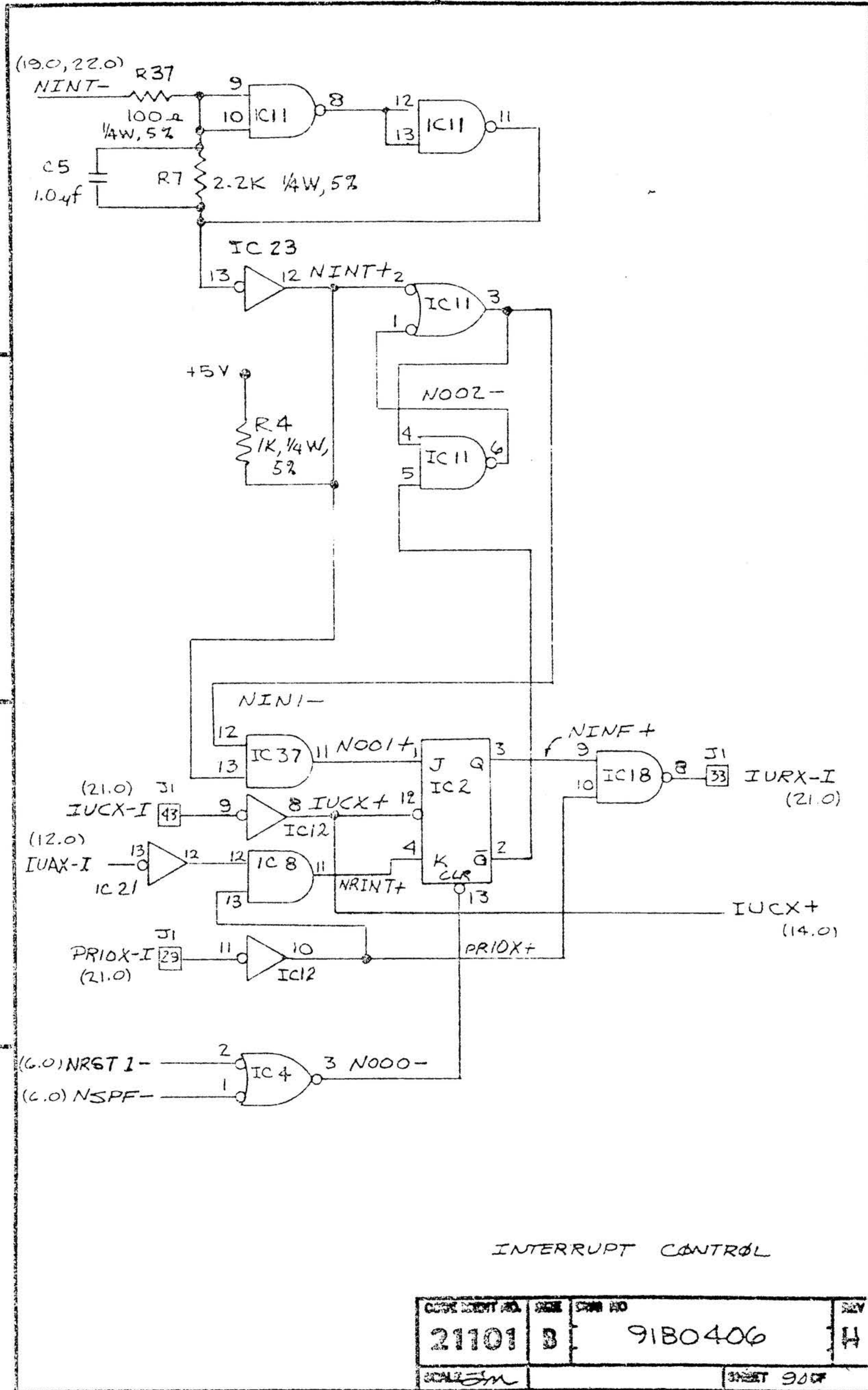
CODE IDENT NO.	SIZE	DATE	REV
21101	B	9130406	H
SCALE 50% L		SHEET 8.0 OF	

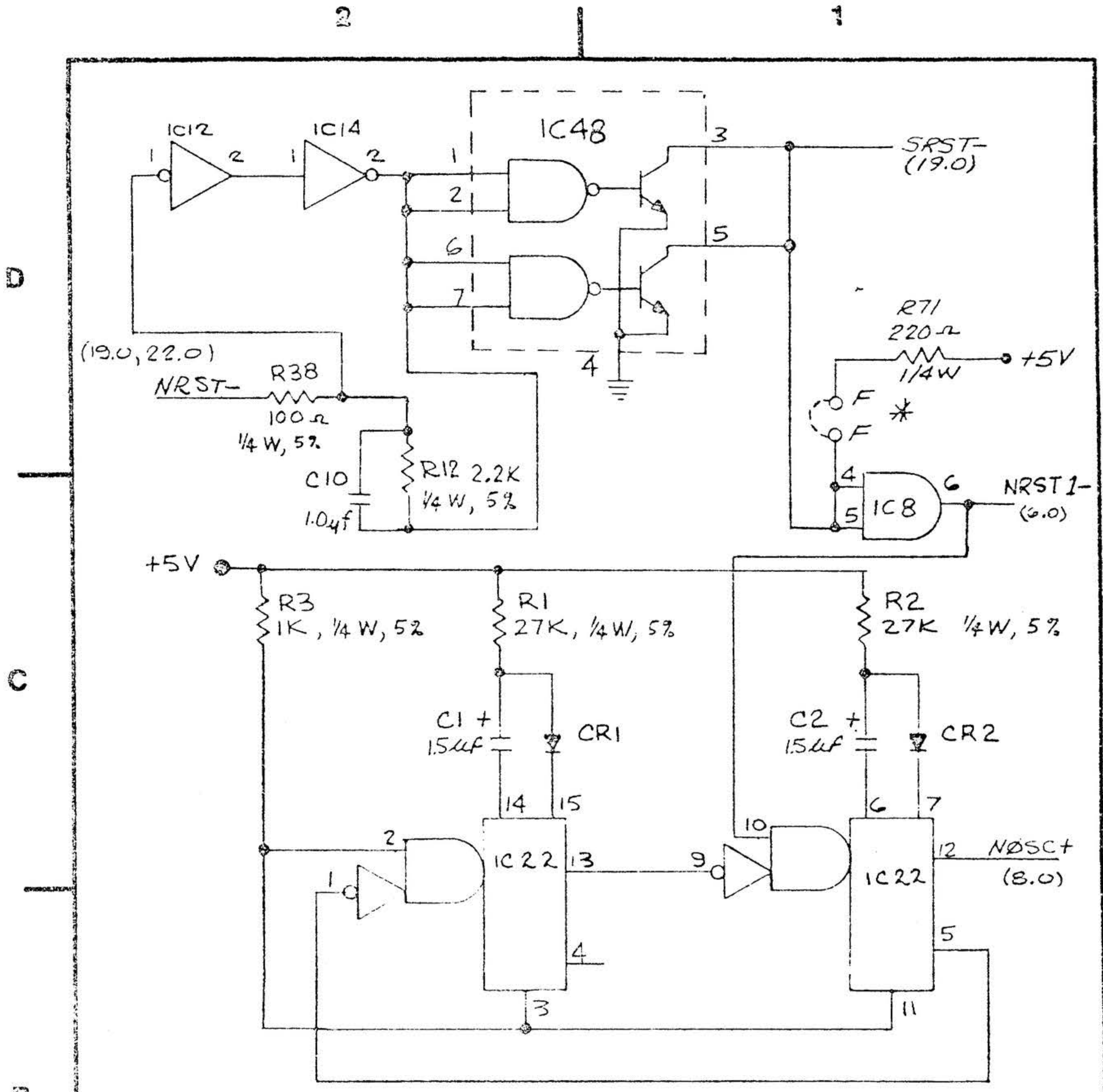
D

C

B

A

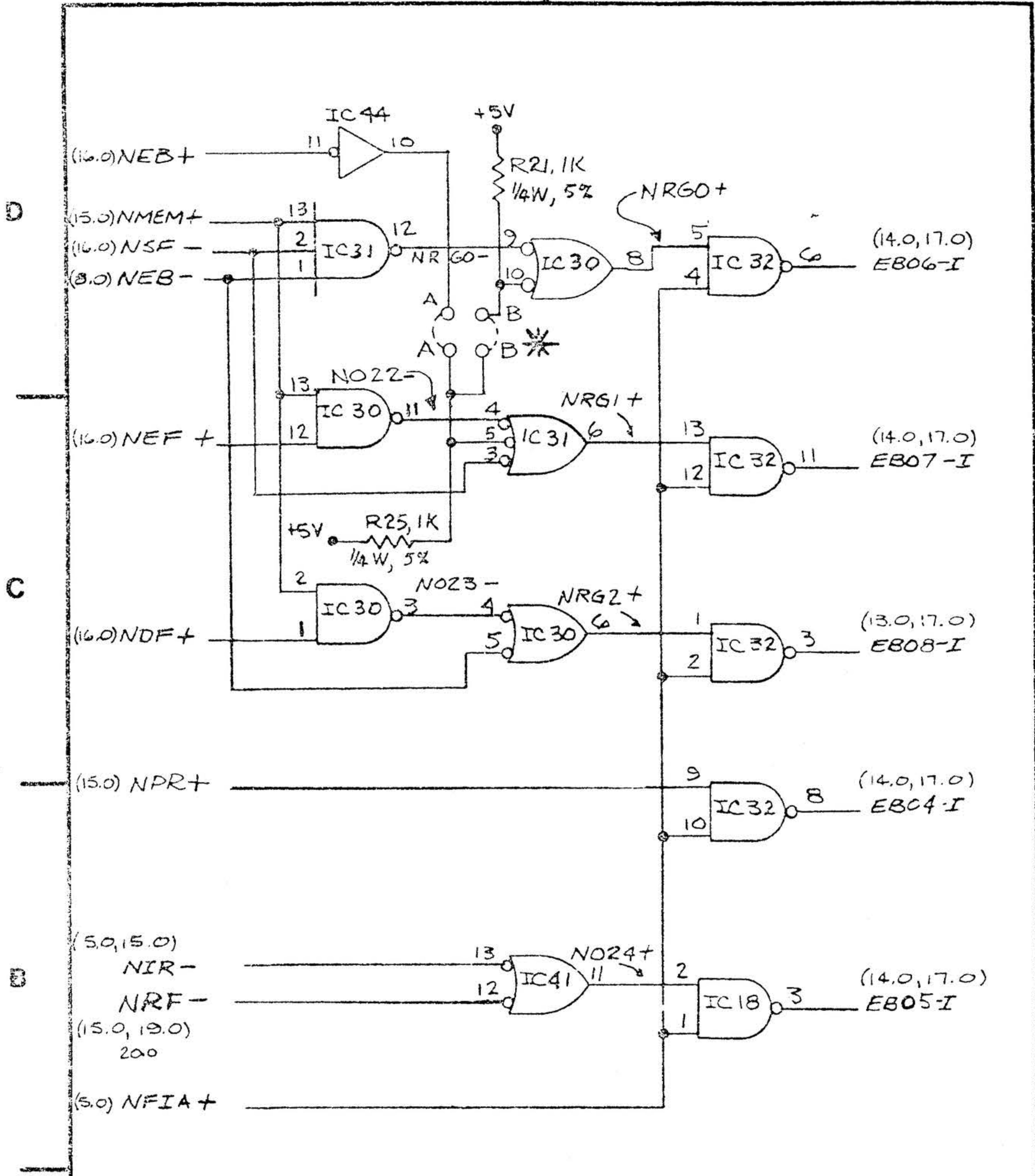




- * JUMPER CONFIGURATION
1. JUMPER F-F FOR TERMINATION OF RESET LINE (SRST-) AT THE FRONT PANEL THRU 220 Ω TO +5VDC (STANDARD CONF. IS INSTALLED)
 2. REMOVE JUMPER F-F TO ELIMINATE TERMINATION OF RESET LINE (SRST-) AT THE FRONT PANEL) (NON-STANDARD CONF.)

BLINK OSC. & RESET CONTROL

CODE IDENT NO.	SIZE	DWG NO	REV
21101	B	91B0406	H
SCALE	SHEET 10.0 OF		



- * JUMPER CONFIGURATIONS
1. NO JUMPERS FOR TTY
 2. JUMPER A-A FOR PAPER TAPE
 3. JUMPER A-A & B-B FOR DISC

EBUS DRIVERS

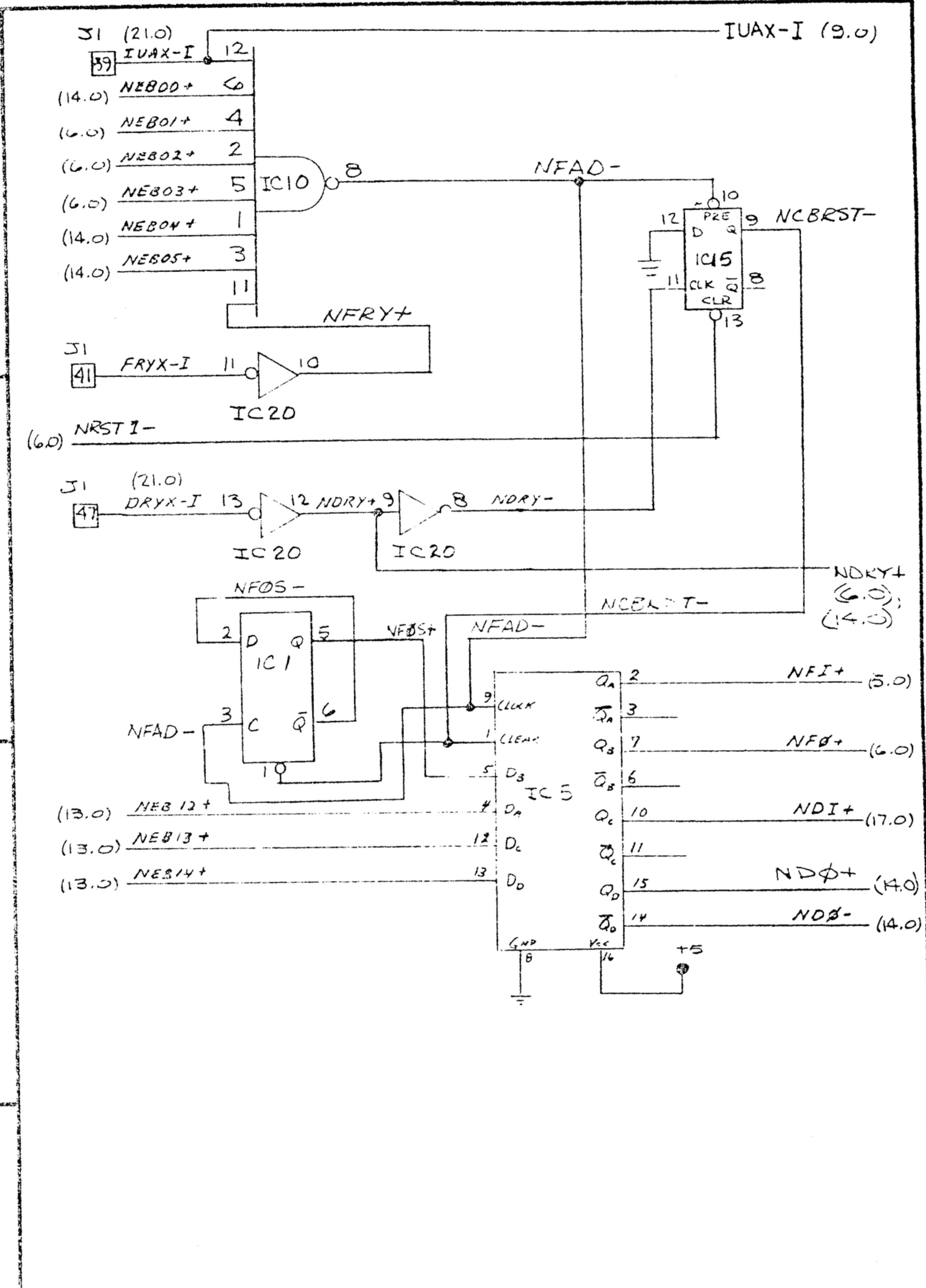
CODE IDENT NO.	SIZE	DATE NO	REV
21101	B	91B0406	H
SCALE 5m		SHEET 11.0 OF	

D

C

B

A



I/O CONTROL BUFFER

CODE IDENT NO.	SIZE	DWG NO	REV
21101	B	91B0406	H
SCALE 1/2		SHEET 120 OF	

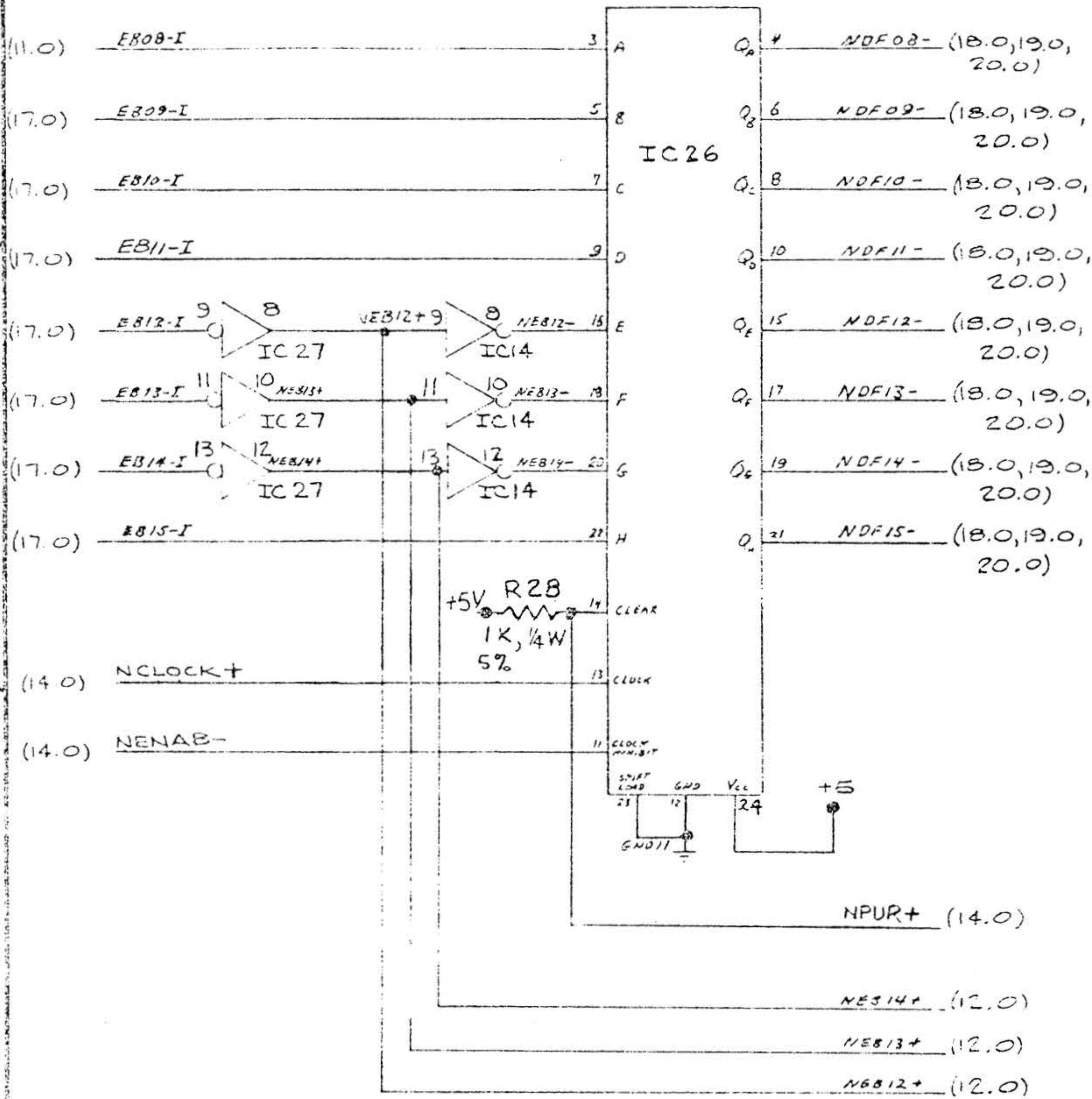
1/2

D

C

B

A



DATA REGISTER - MOST SIGNIFICANT HALF

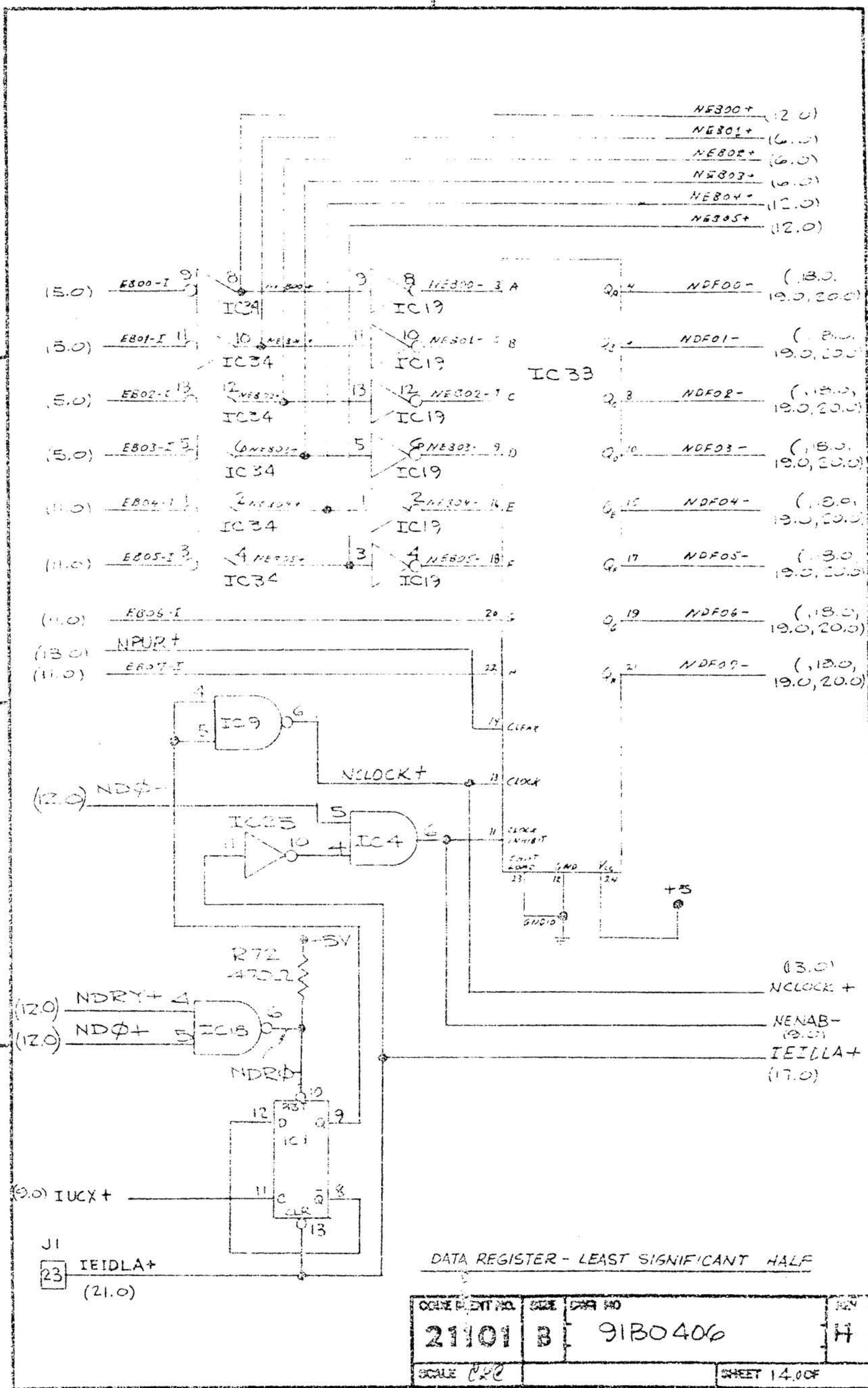
CODE IDENT NO.	PAGE	DRW NO	REV
21101	B	9180400	H
SCALE 1/2	SHEET 13.0 OF		

D

C

B

A



NEB00+	(2.0)
NEB01+	(6.0)
NEB02+	(6.0)
NEB03+	(6.0)
NEB04+	(12.0)
NEB05+	(12.0)
NDF00-	(13.0, 19.0, 20.0)
NDF01-	(13.0, 19.0, 20.0)
NDF02-	(13.0, 19.0, 20.0)
NDF03-	(13.0, 19.0, 20.0)
NDF04-	(13.0, 19.0, 20.0)
NDF05-	(13.0, 19.0, 20.0)
NDF06-	(13.0, 19.0, 20.0)
NDF07-	(13.0, 19.0, 20.0)

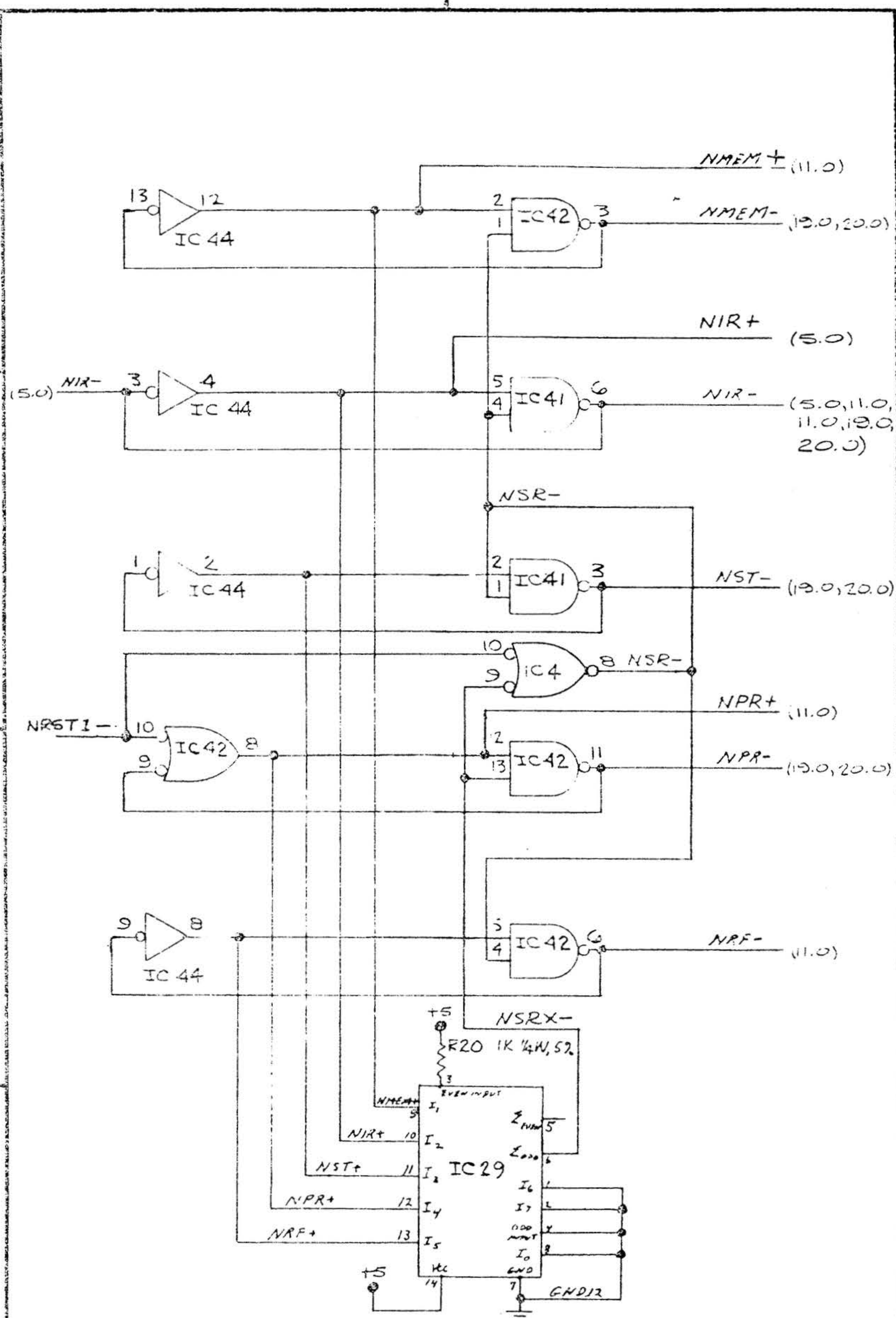
OCURRENCE NO.	SIZE	DATA NO.	REV.
21101	B	9130406	H
SCALE	SHEET		14.00F

D

C

B

A



DISPLAY SELECT/RESET

CODE IDENT NO.	REV	DWG NO	REV
21101	B	91B0406	H
SCALE 1:1		SHEET 15.0 OF	

2

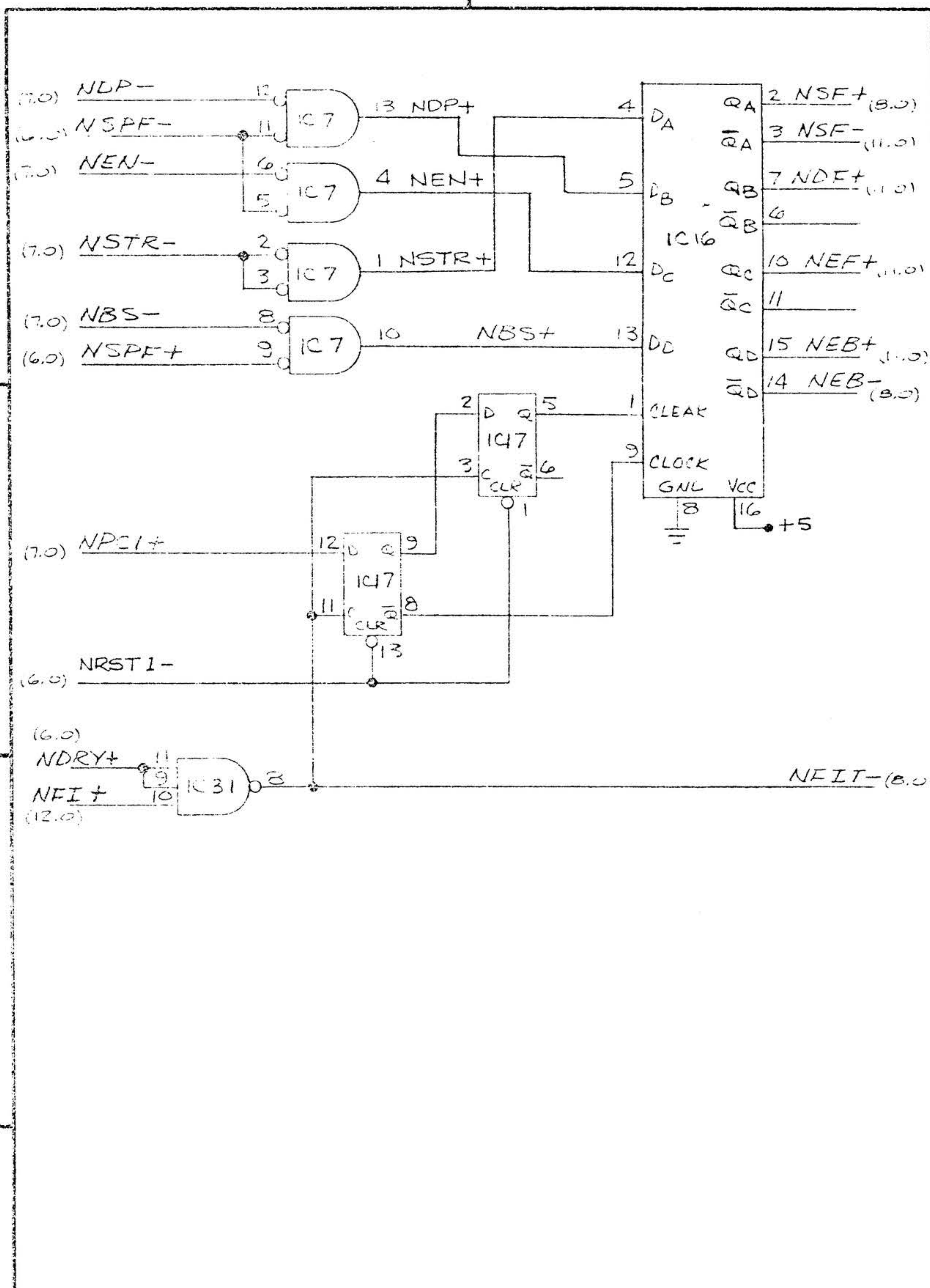
1

D

C

B

A



PULSE REGISTER

CODE IDENT NO.	SIZE	DRG NO	REV
21101	B	91B0406	H
SCALE		SHEET 16.0 OF	

2

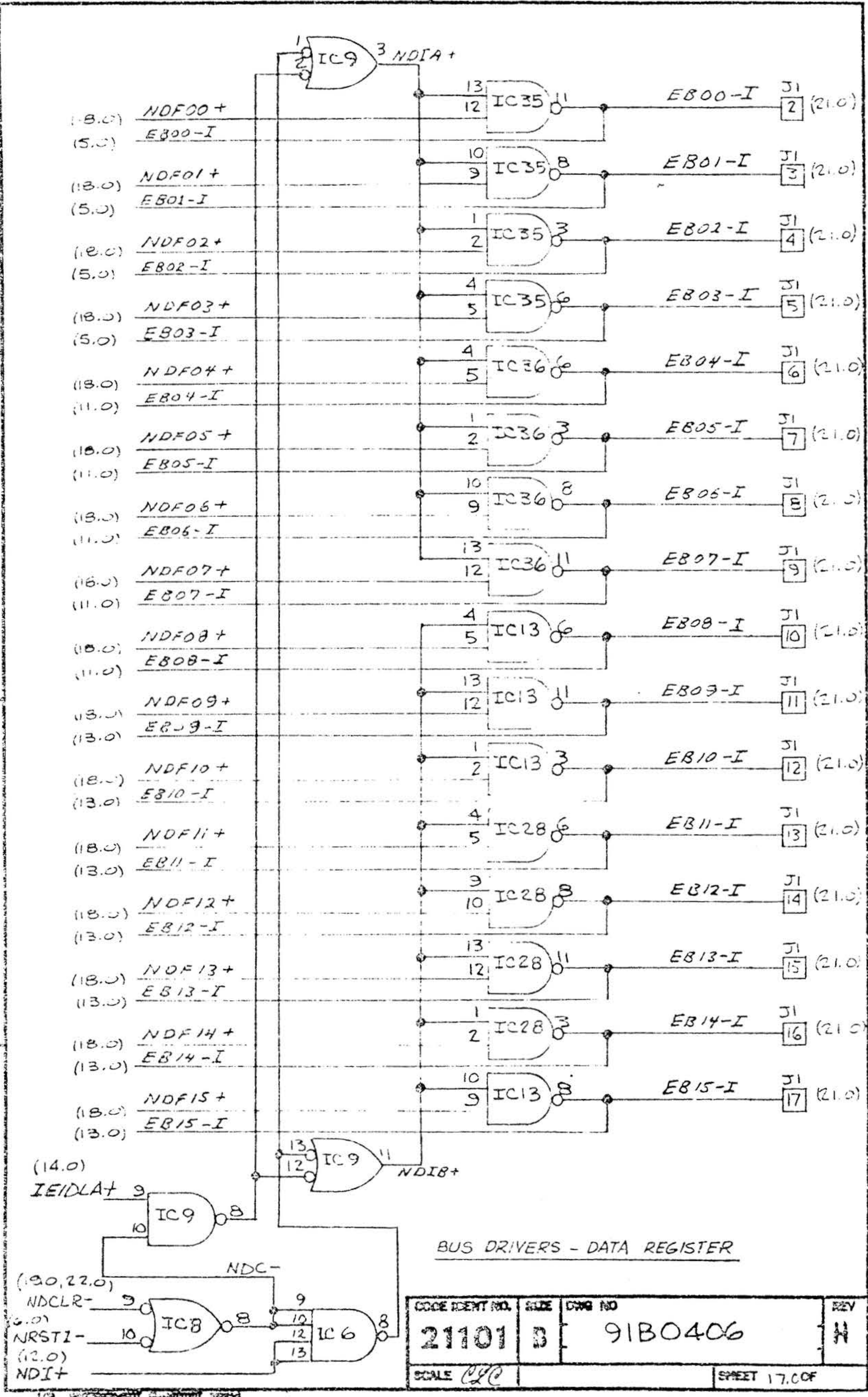
1

D

C

B

A

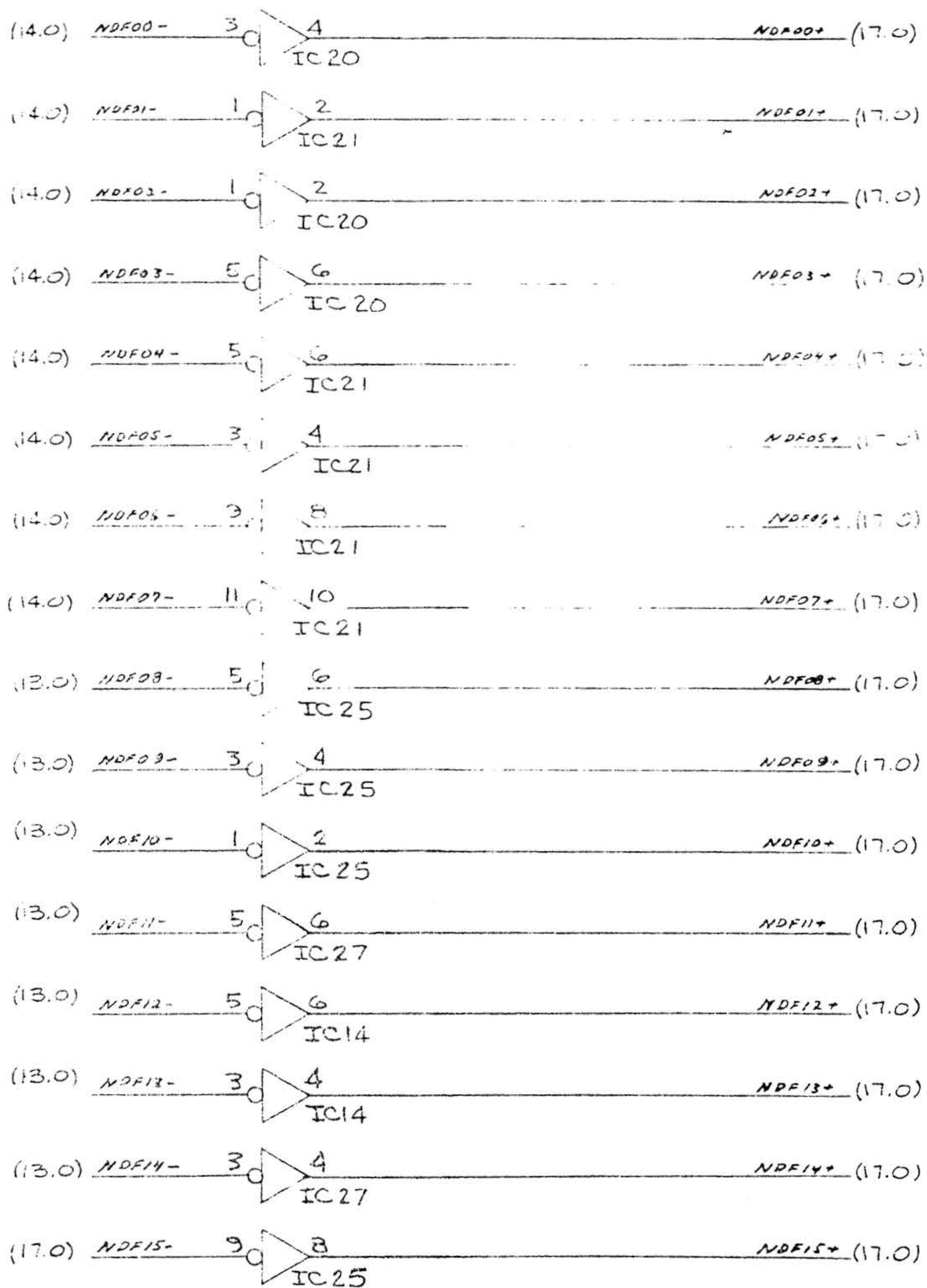


D

C

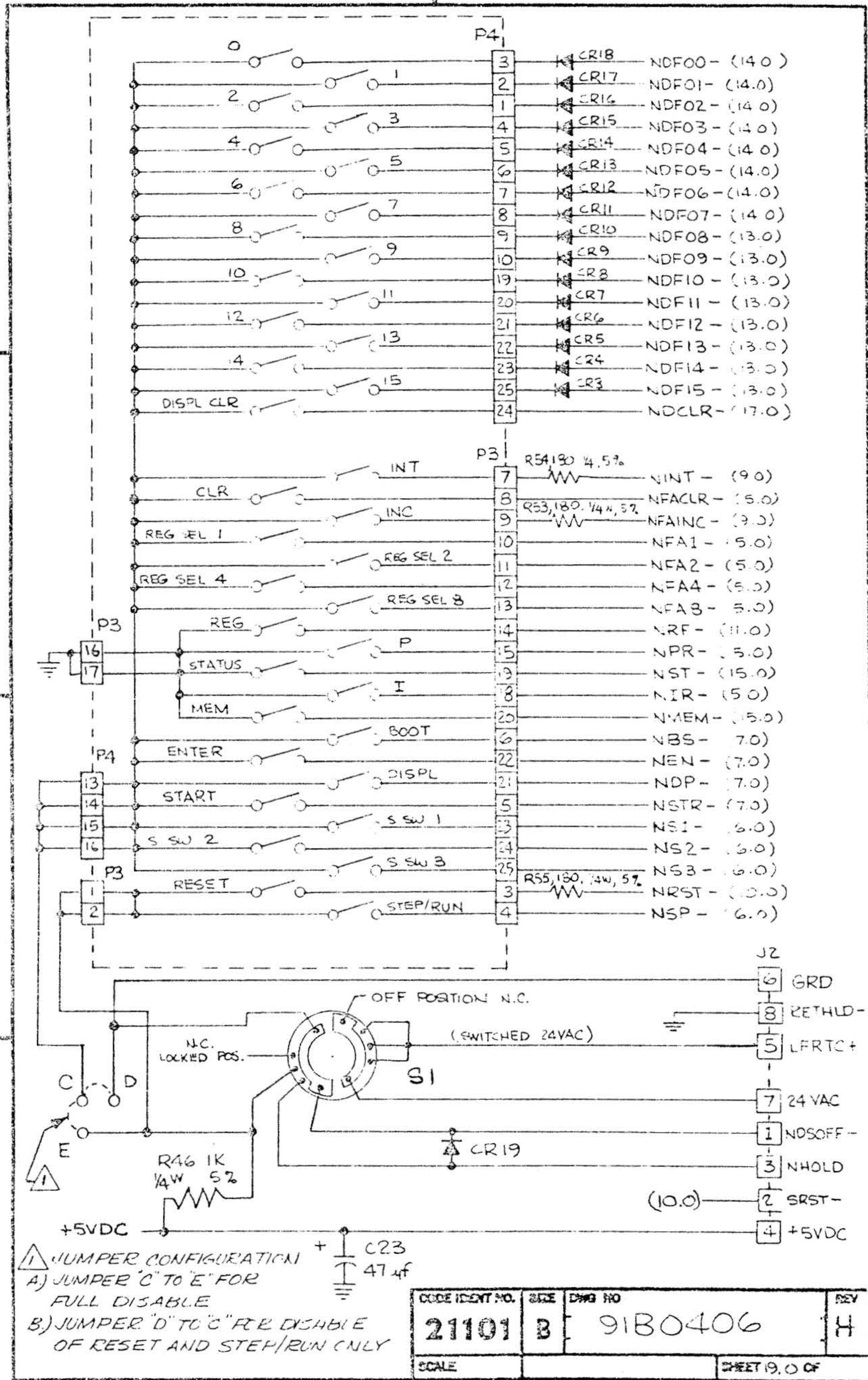
B

A



DATA DISPLAY DRIVERS

CODE IDENT NO.	SIZE	DRG NO	REV
21101	B	91B0406	H
SCALE 1/20		SHEET 15 OF	



1 JUMPER CONFIGURATION
 A) JUMPER "C" TO "E" FOR FULL DISABLE
 B) JUMPER "D" TO "C" FOR DISABLE OF RESET AND STEP/RUN ONLY

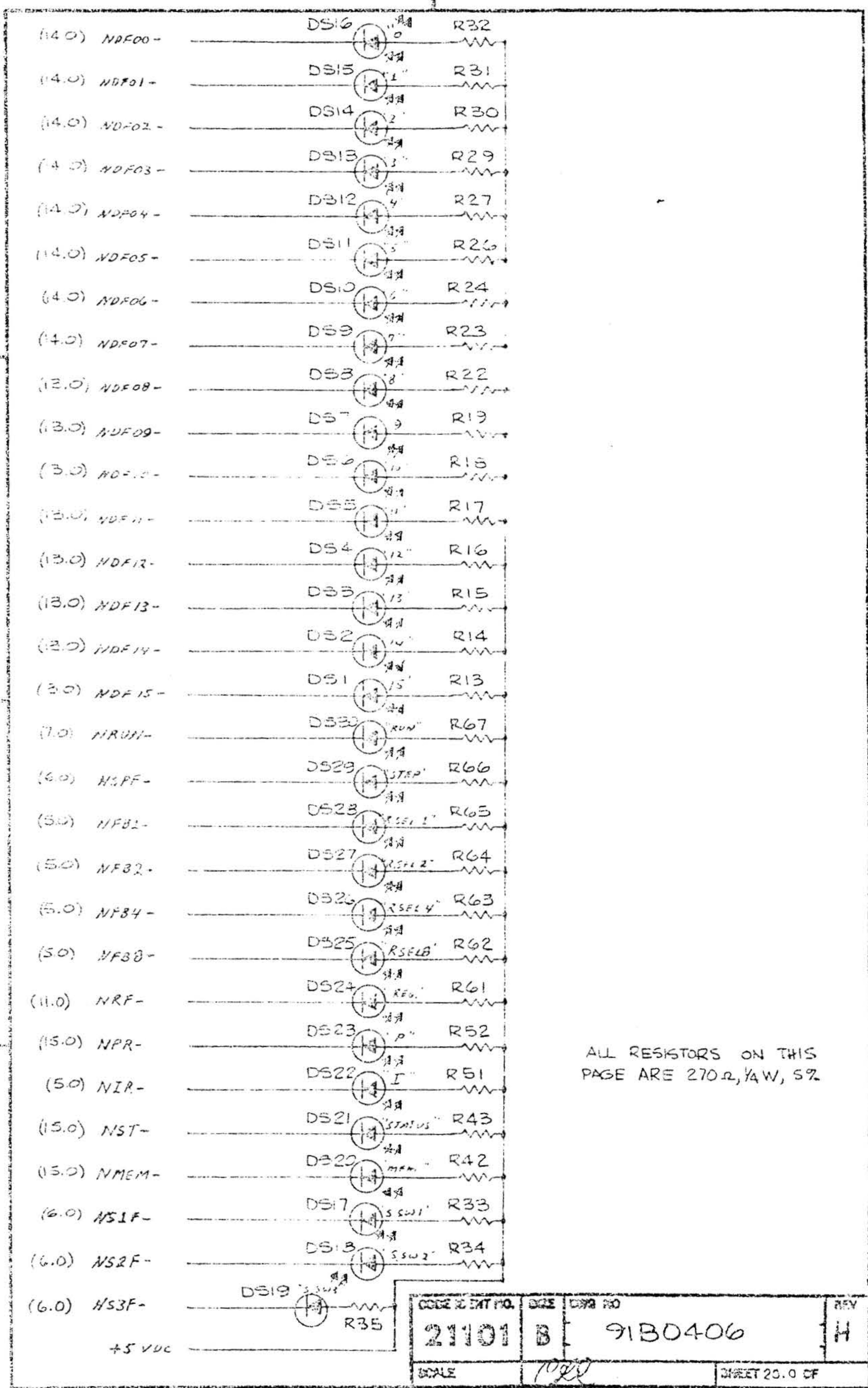
CODE IDENT NO.	SIZE	DWG NO	REV
21101	B	91B0406	H
SCALE		SHEET 9.0 OF	

D

C

B

A



ALL RESISTORS ON THIS PAGE ARE 270Ω, 1/4W, 5%

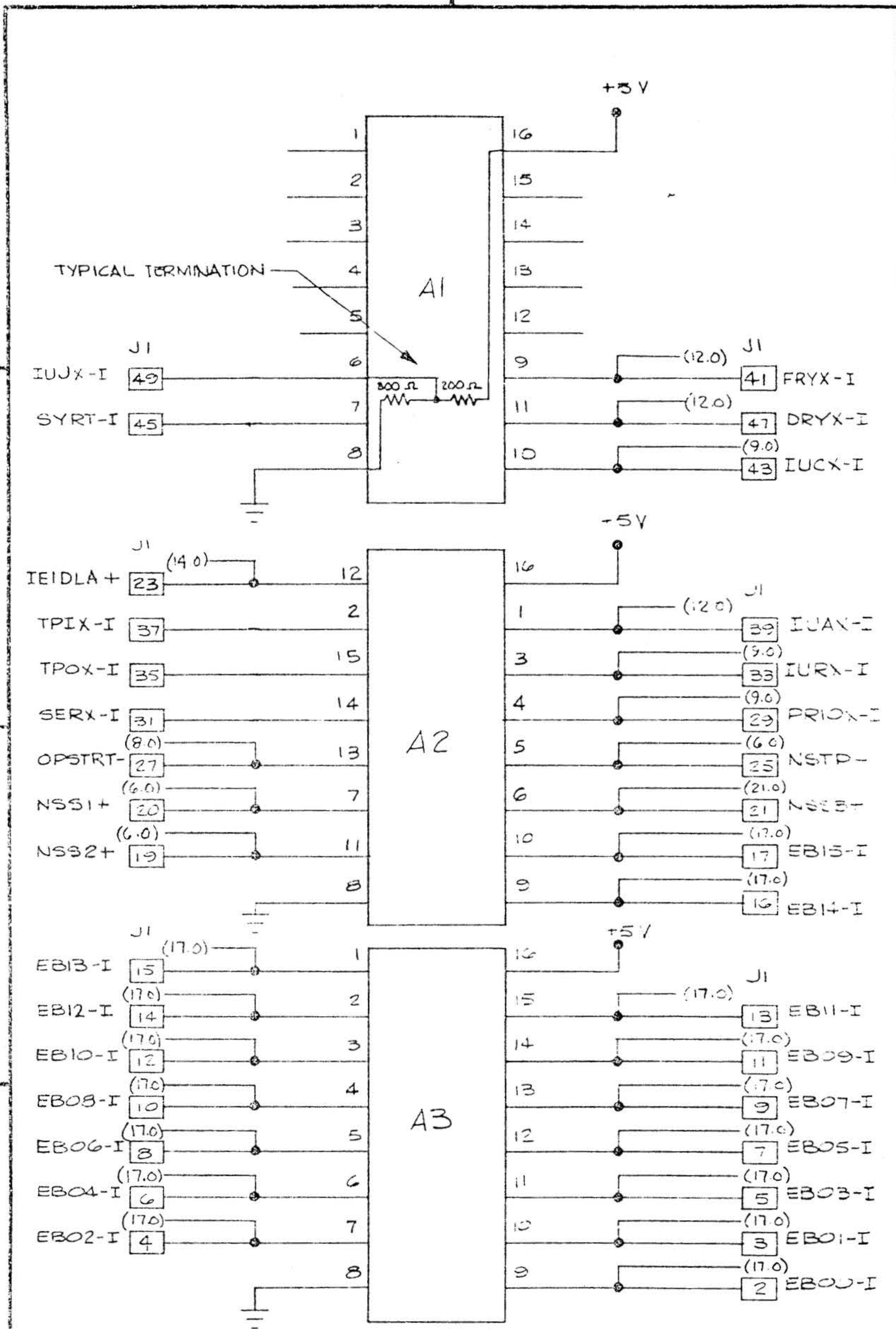
CODE & EXT NO.	DATE	ISSUE NO.	REV
21101	B	91B0406	H
SCALE	100%		SHEET 20.0 OF

D

C

B

A



I/O BUS TERMINATORS

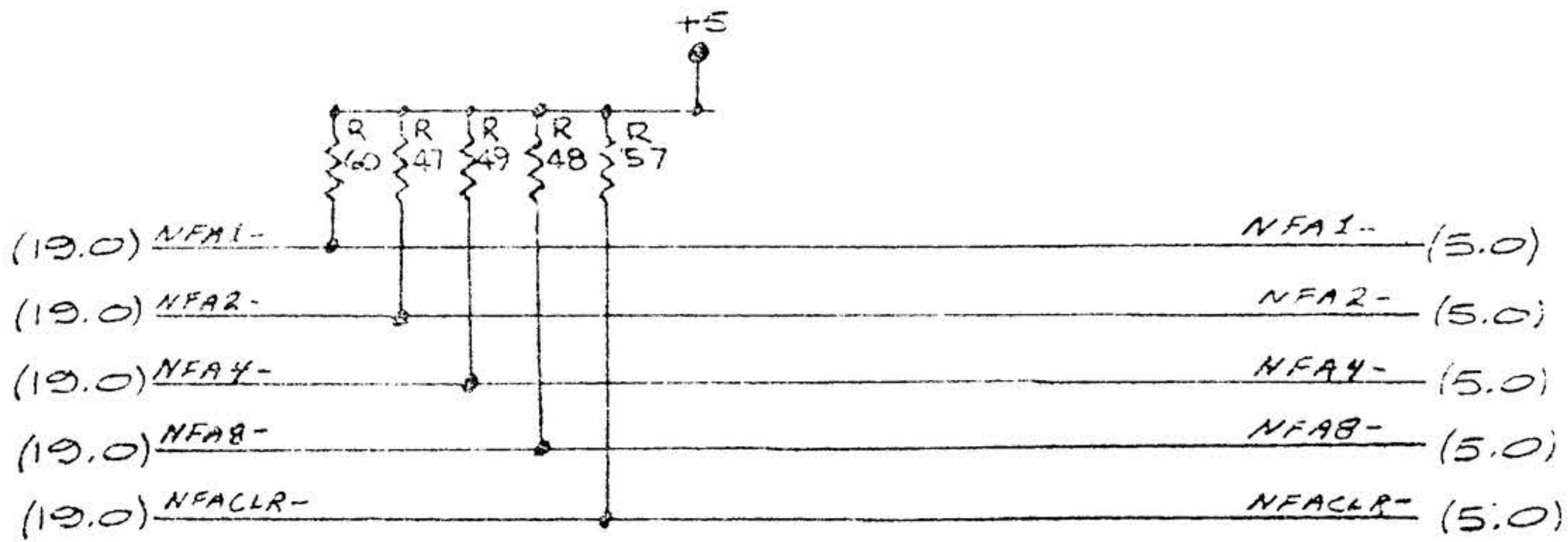
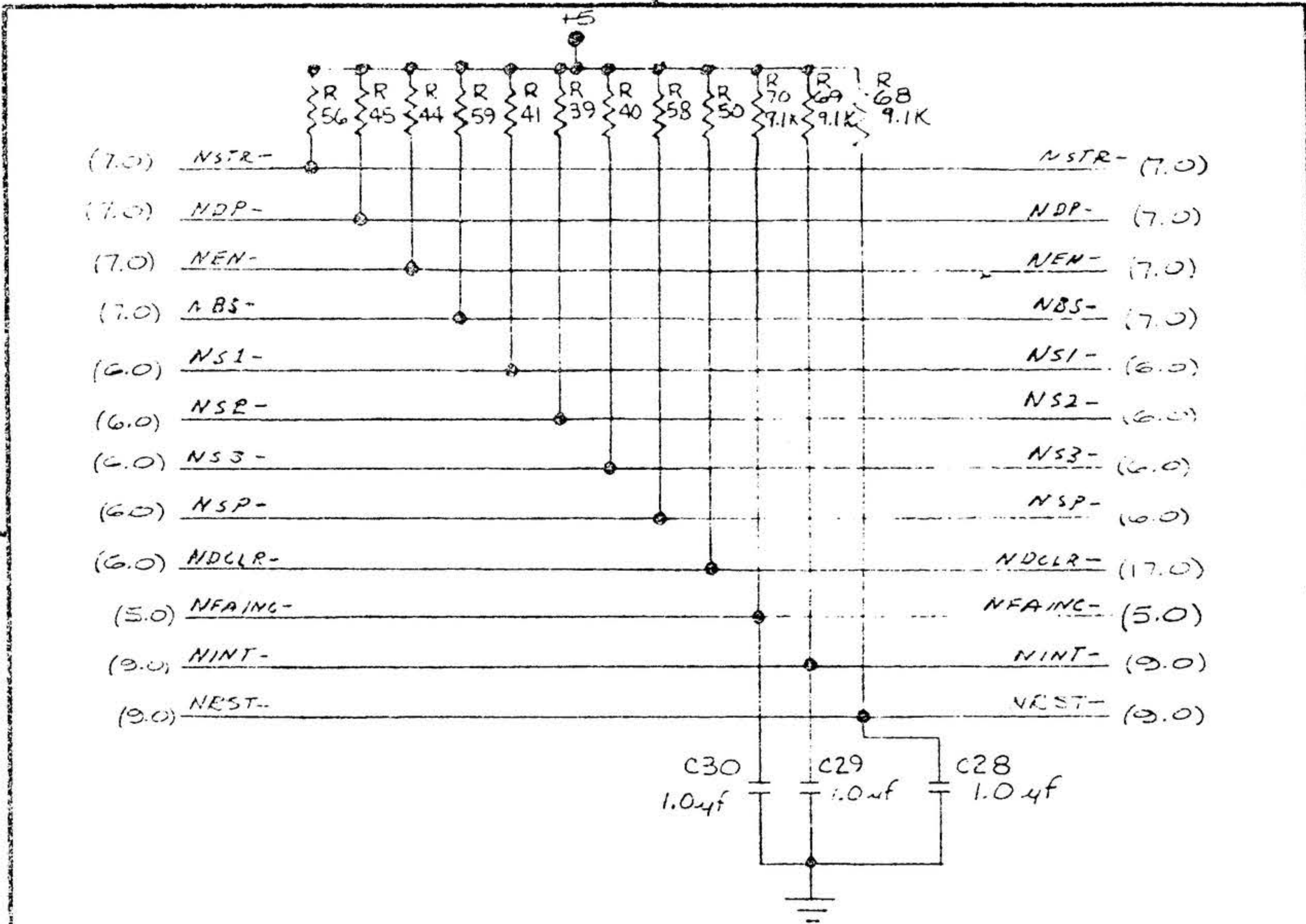
CODE IDENT NO.	SIZE	DWG NO	REV
21101	B	9180406	H
SCALE 1/8"		SHEET 21 OF	

D

C

B

A



ALL RESISTORS ON THIS PAGE ARE 1K, 1/4W, 5% EXCEPT R67, 68 & 69

DEBOUNCE AND SWITCH PULLUPS

CODE IDENT NO.	SIZE	DRWG NO	REV
21101	B	9180406	11
SCALE	SHEET 22.0 OF		